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ABSTRACT

As a result of studies on fitting and machining apprentices attitudes toward employers, a study was conducted to obtain the attitudes of a sample of employers toward apprenticeship. Three hundred questionnaires were distributed to employers of fitting and machine students studying at a number of Sydney (Australia) Technical Colleges. An examination of the response pattern on the thirty-five questionnaires that were returned indicated that (1) in contrast to what some technical college teachers believed, most employers did have set policies for selecting apprentices; (2) more than half offered some form of incentive to apprentices to do a high quality job; (3) the majority had a favorable attitude toward technical colleges and would continue to send their apprentices to technical colleges even if the legal requirement was withdrawn; (4) only one-third believed that they were obligated to fully train the apprentice; (5) the majority answered that apprenticeship was the most effective way of training young people for the skilled trades, but only about half believed apprenticeship would train a sufficient number of workers; and (6) half believed the government should finance and control the content of training. (LRA)

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No.15

ATTITUDE OF EMPLOYERS OF FITTING AND MACHINING APPRENTICES TOWARDS APPRENTICES

By E. Richardson and L.Clayman

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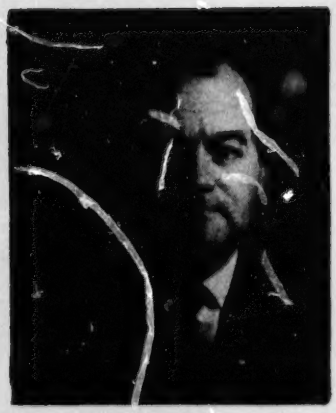

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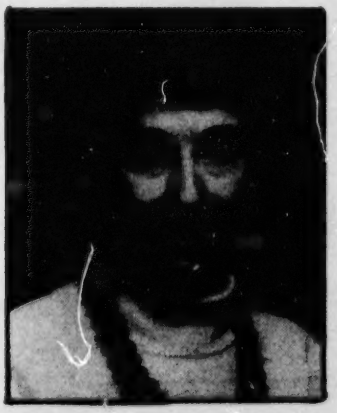

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INTRODUCTION

What do employers think of the apprenticeship system? For the past few years a series of studies have been conducted by the authors on Fitting and Machining apprentices. Reference is made in these studies, which have been published elsewhere, to the critical attitude of a small proportion of the apprentices towards their employers, some of whom, they believe, have no great concern either about their welfare or their training. To complement these studies and to obtain a balanced view it was considered desirable to obtain the attitudes of a sample of employers towards apprenticeship. At the time the study was made (1974) the Federal Government had introduced a number of new initiatives to encourage employers to engage additional apprentices and industry had not begun to show the effects of the economic downturn of the past few months. The views expressed, therefore, are possibly more representative than those which might be obtained at the present time.

Some 300 questionnaires which encouraged free response in addition to selection from set items, were distributed to employers of fitting and machining students studying at a number of Sydney Technical Colleges and a college in a large neighbouring city. Regrettably the response rate to the questionnaire was low (35) and despite a reminder few additional questionnaires were returned. An examination of the response pattern on a number of criteria indicated that although the rate was low, responses were obtained from a representative sample. To avoid repetition the percentage of the responding group in any particular category has been represented as (x).

SELECTION OF APPRENTICES

Comments have been made by some technical college teachers that too little attention is paid to the selection of apprentices and hence many are unable to profit from theoretical studies in the trade course. Employers were asked on what basis they selected their apprentices. More than half (57.5) stated that they used an interview plus the applicant's school record. A further 26.8 per cent used some kind of testing (including vocational guidance reports) as well as interview and school record. Contrary to an earlier unpublished study there did not appear to be a relationship between method used and size of firm.

The minimum requirements varied substantially: 10.9 per cent stated that they did not have minimum requirements for the job concerned either because of lack of choice of applicants or lack of necessity; 27.3 per cent insisted on a School Certificate and 10.9 per cent on passes in certain specified subjects, mainly mathematics and science, but not necessarily the Certificate itself. The rest insisted on applicants possessing a School Certificate with certain subjects included, mainly mathematics and science and in some cases technical subjects; 12.7 per cent requiring in addition a credit level in mathematics and science.

The majority of employers (80.5) were influenced by their labour requirements and/or the number of tradesmen already employed, in considering the number of apprentices to take on. Very few (3.6) considered cost or time involvement as main factors and only 0.9 per cent decided purely on the basis of their facilities. Of those who commented further on this question, there was an obvious concern to employ those for whom the firm had the necessary facilities, tradesmen and supervisory staff.

EDUCATIONAL STANDARDS OF APPRENTICES AND INCENTIVES PROVIDED

Statements from employers frequently appear in the press that applicants for apprenticeship "are not as good today as they were years ago". Employers were asked questions on the number and standard of applicants for apprenticeship "last year' as compared to five years ago. The response was varied: 10.0 per cent had only one applicant for each position available; 22.7 per cent had two; 19.1 per cent had three applicants and 30.9 per cent had more than three. A further 5.5 per cent stated that they could not fill their vacancies in Fitting and Machining and took all who applied. Nearly 40 per cent stated that they had as many applicants as they had five years ago, an additional 4.5 per cent in fact thought they had more, while 48.2 per cent did not have as many.

Only 21.3 per cent of the employers thoug t that the applicants of "last year" had a better than average standard of education. Twenty-five per cent thought it satisfactory or adequate, while 48.2 per cent thought it poor compared with previous years. The main supplementary comment on this question was that apprentices lacked interest or initiative.

A large number of employers (58.2) thought the award wage for apprentices was about right, 33.6 per cent thought it too low and, surprisingly in view of press comment, only 4.5 per cent too high.

More than half (59.9) of the employers offered some form of incentive to apprentices at work to do a high quality job, while 76.5 per cent provided either regular or occasional drawing office experiences. However, from comments made on the latter, it would appear that a number of apprentices, particularly those not deemed to be "capable" do not get any drawing office experience during their term of apprenticeship. This finding was in agreement with an earlier study of third year apprentices in six Sydney technical colleges (Richardson and Clayman: C.A.T. Monograph No.5, 1974).

TECHNICAL COLLEGE

The overwhelming majority of employers (94.6) stated that they would continue to send their apprentices to technical colleges even if the legal requirement were withdrawn. A favourable attitude towards the existing technical course as a whole was reported by 78.8 per cent of employers, 15 per cent were neutral in their attitude and 6.2 per cent had an unfavourable attitude.

As far as the general standard of the course is concerned, most of the employers (78.1) thought it was about right while 14.5 per cent thought it too easy and only 1.8 per cent too difficult.

Most employers (75.5) thought the theory and practice components of the current course well balanced, while a few (5.5) thought the course duplicated on-the-job training. A small number (6.4) thought the course too theoretical, while only two employers thought it too practical.

Are more substantial changes needed in the part the technical college plays in the training of apprentices? To prove this further, employers were asked what tasks, from a list of alternatives, they expected the technical college to perform.

The four tasks suggested were:

1. To make up deficiencies the apprentices may have in reading, writing and arithmetic - one employer saw this as the technical college's sole function and 54 saw it as a function in combination with others.

2. Teach the theory of the trade - three employers saw this as the sole function and 97 saw it as a function in combination with others.

3. Give apprentices a thorough training in all of the standard operations and processes of the trade - five saw this as the technical college's sole function and 81 saw it as a function in combination with others.

4. Provide training in any aspects of the trade not available at work. One employer saw this as the technical college's sole function; 77 saw it as a function in combination with others.

Most of the employers (92.1) thought they shared with the technical college the responsibility for teaching apprentices. When asked to rate the aspect of the technical college training which they saw as being of greater value to the employer, 45.9 per cent stated theoretical training and 4.5 per cent practical training, while 46.8 per cent gave the two components equal value. Most employers thought that the theory side of the trade should be taught to apprentices, with 44.7 per cent seeing this as a function for the technical colleges, 1.8 per cent as a function for the employer and the largest group, 50.9 per cent, as a function of both technical college and employer. Only two employers thought that the practice component of the trade should be taught only by the technical college, while 16.1 per cent thought it was the task of the employer and 81.3 per cent saw it as a function for both.

When asked to suggest improvements in the existing technical college course, various comments were made, including the desirability of more liaison between the technical college and employers, up-dating of the course and providing training which is unavailable at work, provision of smaller classes and remediation for slower students, provision of different level courses for more able students, opportunity for specialisation, and refresher periods in industry for teachers.

The role of the technical college in supplying the systematic training component of apprenticeship training as distinct from the educational component has been debated overseas, particularly in the United Kingdom, and substantial changes have occurred in recent years. In the United Kingdom the main function of the technical college is seen as providing

the theoretical groundwork of the trade, and except for those colleges which have contracted separately to undertake specific training work on an economic cost basis on behalf of training boards such as the Engineering Industry Training Board, curricula have been changed to reduce or eliminate the specific training components. Thus the City and Guilds Mechanical Craft Practice Course (C & G 155) has been replaced in many colleges by basic courses in Craft Studies (C & G 200 and 205).

The technical college course is apparently considered to be of importance by many employers, since 50.4 per cent give some form of incentive to apprentices for satisfactory performance and attendance at technical college. Moreover, 72.6 per cent thought that apprentices should be compelled to pass the technical college course to become tradesmen. Only 30.1 per cent, however, insist on a certificate from the technical college before they employ a tradesman. Of those who commented further on trade certification, a third stated that they prefer it, but do not usually have much choice and a further 20 per cent stated that it is in fact desirable, but they do not insist on it.

The system of day release met with the approval of 81.3 per cent of employers which, considering the inconvenience caused to them and their production schedules, is significant. Only 8.9 per cent disapproved of the system and a further 8.9 per cent neither approved nor disapproved. Most of the small group who disapproved felt that part of the training should be done in the apprentice's own time.

Most employers (74.3) thought that the apprentice, the employer and the trade all benefited equally from training given at the technical college, but a smaller group, 15 per cent, stated that it was the apprentice who benefited most. Similar opinions were expressed as far as training on the job was concerned. Employers were asked a series of questions regarding Certificate level courses in engineering, including their estimate of a desirable ratio between Certificate and Trade only students. For every ten fitting and machining apprentices employed, 50.5 per cent of the employers stated that they would like to see four or fewer do a Certificate course, 11.1 per cent opted for five to eight, and 32.4 per cent would like all those who have the capacity, to undertake a Certificate course. Some employers felt the need to select their apprentices so that a proportion had little aptitude for Certificate level studies and 45.9 per cent of the sample stated that they select most of their apprentices from boys who seem to have an aptitude for trade work but seem unlikely to attempt studies in a Certificate course. For those boys who are selected as likely to attempt a Certificate course, it seems that assistance in different forms is provided occasionally, mainly in the form of payment of fees (in the past) and in some cases books, and comparatively rarely study leave before examinations, and extra day release.

In the majority of firms there do not seem to be any conditions presenting difficulty for Certificate students, but for a small percentage (9.9) there were difficulties caused by shift work, periods away from home base, working situations away from technical colleges or irregular hours due to plant breakdown.

A substantial proportion of firms (approximately 59 per cent) were giving time off to a range of employees other than apprentices to attend technical college, in some cases in appreciable numbers.

OBLIGATIONS TOWARDS APPRENTICES

Employers were asked to indicate from several alternatives what they considered to be their obligations towards their apprentices. The answers provided ranged from giving one day release but no additional systematic training in any form, to providing at least six month's initial off-the-job training followed by systematic on-the-job training. About a third of the employers (32.3) accepted as an obligation the provision of full training on the job by an organised training and explanation process with arrangements made for experience elsewhere on equipment or tasks lacking in the establishment. However forty of the employers, a disturbing number, believed they fulfilled their obligation either by granting day release and by allowing the apprentices to pick up what they could from the job. Thus for forty of the employers, the training of their apprentices would entail nothing more than allowing them time off to go to technical college, a legal obligation, and providing a range of experience within the trade from which the apprentice might learn, if he is capable, by watching and doing.

ATTITUDES TOWARDS APPRENTICESHIP AND SOME ALTERNATIVES

Since the whole concept of apprenticeship has come under scrutiny in recent years, particularly overseas, and certain reforms mainly in the form of financial subsidy, have been implemented in Australia, employers were asked whether they thought apprenticeship was the most effective way of training young people for the skilled trades. The majority, 82.4 per cent, answered that they did think so and reasons cited included the combination of theory and practical training obtained by the combination of technical college education and experience in a working environment, and the binding of both parties to a contract. Of the small percentage (17.0) who stated that it was not the most effective method, various comments were made including the statement that since the trade is becoming specialised there is not the opportunity for general training, that all of the teaching should be done by qualified teachers with proper equipment, and that where firms do not or cannot train, full time or some type of sandwich training would be better.

They were also asked whether they considered that apprenticeship is an effective way of producing a sufficient number of skilled workers in the trades. There were more differences of opinion on this question. About one half (53.4) stated that it is the best way, with a further 8.8 per cent stating that it is effective provided there are incentives, that all employers must contribute and that apprentices are helped by tradesmen. Of the small number of comments made by those in favour of retaining the existing system the main one was that the system has always worked and they do not know a better way. Few of the 38.8 per cent who stated that it was not effective made additional comments, but some added that it precludes older people and that at times adult training is needed, that it has resulted in an acute shortage of tradesmen and that pay and conditions make it difficult to keep apprentices in the trade.

Employers were approximately evenly divided in their response to a tied payments question, that is, whether the Government should meet the cost of training on the condition that it could then specify what has to be done. A range of selections were offered as to the best way of using Government money for training. The results obtained are shown in the following table:

		%
1.	Set up special schools to provide entrants with full time training for at least one year before entry to the trade	34.3
2.	Set up special schools to carry out complete training before entry to the trade	8.8
3.	Use existing systems, pay employer real cost of training, provided training is inspected regularly by government and no payment made if training ineffective	50.0
4.	1 + 2	2.0
5.	1 + subsidise employer for three years and let him select apprentice initially	1.0
6.	1 + 3	2.9
7.	None	1.0

Thus a large number of employers are in favour of the existing system of training with controls built in but more than one third are in favour of training schools to operate for at least one year. The Tripartite Mission report, which is no longer new, stated: "The outstanding development in the training systems in most European countries is the provision of a period

of continuous off-the-job training early in the training period. There is general agreement in Europe that this arrangement, followed by a period of on-the-job training, produces a skilled worker of better quality and greater flexibility in a shorter time". Half of the Australian employers, however, still believe that the old system is the best method of training and that Government money for training should be spent on this system, despite the fact that the system has resulted in an acute shortage of skilled tradesmen during normal economic growth periods, and, secondly, as was found in our earlier study, many apprentices trained under it received only a limited range of training, if any range at all, within their firms. However, employers did opt for the old system but with controls and inspection and penalty for not training.

Employers were requested to make any further comments they wished on apprenticeship. Very few chose to comment further, but comments made did include such opinions as: too many pupils stay at school to complete fifth and sixth forms and are disappointed regarding employment on completion of schooling; secondary school education is poor and boys do not receive sound guidance while at school; there is a need for co-operation between the Commonwealth Training Service, schools and industry; the present system of apprenticeship is outdated; there is a shortage of good quality apprentices due to poor awards for tradesmen; the course at technical college needs updating and that the present system is unfair to firms who do train and lose their tradesmen to firms who do not contribute to the pool of skilled tradesmen.

It is difficult at the present time to gauge the effect of Federal Government grants on employers of new apprentices. The number of apprenticeships approved in New South Wales for the period July to October 1975 was 1,957, a substantial decrease from the total of 2,648 approved during the same period in 1974. Without Federal Government subsidy, it is clear that the number would have fallen further. But can we afford, as a nation, to rely on a system of supply which is so dependent on temporary economic circumstances? Recovery of the economy may in fact be retarded by the shortage of skilled manpower produced during a period of economic downturn. Perhaps this could be overcome if we were confident that the apprenticeship system is the best method of training skilled craftsmen where the evidence is against rather than for the system, since many employers have neither the facilities nor the skilled training staff necessary to provide the depth and variety of training required to produce the adaptable tradesmen needed for the latter part of the twentieth century.